

REMARKS

In the Action, claims 48-50, 53-56, 59-63, 66-70, 73 and 78-81 are rejected, and claims 37-47, 51, 52, 57, 58, 64, 65, 71, 72 and 74-77 are withdrawn from consideration as being directed to the non-elected invention. New claims 82-89 are added to depend from claims 48, 54, 60 and 67. Claims 82-85 recite the water-absorbing agent comprising a cationic polymer. Claims 56-89 recited the saline flow conductivity of the water-absorbent agent. Support for claims 56-89 are found on page 45, lines 13-14 of the specification.

The Action maintains the restriction requirement between the Group I and Group II claims on the basis that the claims are mutually exclusive species in an intermediate and final product relationship. However, the Action has not identified which is the intermediate product and which is the final product. Thus, the basis for the restriction is unclear. The claims are directed to a water-absorbing agent and to a process for producing the water-absorbing agent. The water-absorbing agent of each group of claims are defined by the same characteristics. The claims reciting the two components are not an intermediate for producing the water-absorbing agent. Furthermore, the generic claims reciting the water-absorbing agent are not an intermediate for producing the two component system.

The Action contends that the elected claims are directed to a one component system and are distinct from the claims directed to the two component system. However, the elected claims are rejected over WO 95/22358 which discloses a two component system. Thus, it is unclear how the Action contends that the groups of claims are distinct and is also able to rely on cited art disclosing a two component system to reject the “one component” system. Accordingly, Applicants respectively submit that the restriction is improper and should be withdrawn.

Rejection of Claims 48-50, 53-56, 59-63, 66-70, 73 and 78-81

Claims 48-50, 53-56, 59-63, 66-70, 73, 78-81 are rejected under 35 U.S.C. § 102(b) as being anticipated by or in the alternative under 35 U.S.C. § 103(a) as being obvious over WO 95/22358.

The rejection is based on the position that WO '358 discloses water-absorbent materials containing surface crosslinked hydrogel forming absorbent polymers. The Action suggests that the materials are substantially the same and thus inherently have the same properties as the water-absorbing agent of the claimed invention.

WO '358 does not disclose or suggest a water-absorbing agent having a free swelling capacity, absorption capacity and gel deformation as recited in claim 48. Furthermore, the Action provides no basis for the position that the claimed properties are inherent in the materials in WO '358. In particular, the gel volume disclosed in '358 is measured using Jayco synthetic urine. In contrast, the gel volume of the present invention is measured in a 0.9 weight % sodium chloride solution. The 0.9 weight % sodium chloride solution of the present invention has a higher salt concentration than the Jayco synthetic urine so that the measurement of the gel volume of the present invention is lower than the measured gel volume of WO '358.

WO '358 is relevant to the extent that water-absorbent materials are disclosed. The water-absorbing resins and the resulting water-absorbing materials produced in WO '358 do not have the claimed properties. Referring to Comparative Referential Example 3 in the present specification, the water-absorbing resin C-2 is produced. The water-absorbent resin particles C-2 are used in Comparative Example 6. Each of these materials are outside the values recited in the claims. The gel deformation under load (16 hr PT) of the water-absorbent resin C-2 obtained from Comparative Referential Example 3 is higher than that of the water-absorbing agent of Comparative Example 6 because the water-absorbent resin C-2 is not mixed with a cationic polymer compound. The water-absorbing agent of Example 1, 2, 4 and 6-11 comprise the

water-absorbent resin A-1 and a cationic polymer compounds so that the gel deformation under load of the water-absorbent resin A-1 of Comparative Example 1 is higher than the water absorbing agent of Examples 1, 2, 4 and 6-11. Furthermore, the water-absorbing resin particles C-2 is substantially the same as the water-absorbent particles used in Examples 2 and 3 of WO '358. Comparative Example 6 of the present specification uses the resin C-2 which corresponds substantially to the water-absorbent resin of WO '358. As shown in Table 2 on page 111 of the substitute specification, Comparative Example 6 which comprises the water-absorbent resin particles C-2 and a cationic polymer compound has a gel deformation of 15.7. Claim 48 specifically recites that the resulting water-absorbent agent has a gel deformation of not more than 12.5. Thus, it is clear that the resulting material of WO '358 does not inherently have the claimed properties. Accordingly, the claims are not anticipated by or obvious over WO '358.

As shown in Table 2 on page 111 of the substitute specification, the water-absorbing agent of Comparative Example 6 has 16 hrBBS of 43.5 gf. As noted above, the polymer of C-2 of Comparative Example 6 is substantially the same as the polymers of WO '358. Claim 54 specifically recites that the water-absorbing agent exhibits 16 hrBBS of not less than 80 gf. Thus, it is clear that the resulting material of WO '358 does not inherently have the claimed properties. Accordingly, the claim 54 and the claims depending therefrom are not anticipated by or obvious over WO '358.

As shown in Table 2 on page 111 of the substitute specification, the water-absorbing agent of Comparative Example 6 has Δ PT of 4.7 cm. Claim 60 specifically recites that the water-absorbing agent exhibits Δ PT of not more than 3.5 cm. Thus, it is clear that the resulting material of WO '358 does not inherently have the claimed properties. Accordingly, the claim 60 and the claims depending therefrom are not anticipated by or obvious over WO '358.

As shown in Table 2 on page 111 of the substitute specification, the water-absorbing agent of Comparative Example 6 has DBBS of 52.8%. Claim 67 specifically recites that the

water-absorbing agent exhibits DBBS of not more than 40%. Thus, it is clear that the resulting material of WO '358 does not inherently have the claimed properties. Accordingly, the claim 67 and the claims depending therefrom are not anticipated by or obvious over WO '358.

As disclosed in the specification, the invention is directed to a water-absorbent agent having specific properties and that these properties are determined by the water-absorbent resin particles and the cationic polymer as noted on page 22 of the specification, the water-absorbent resin particles preferably have an absorption capacity under load (AAP) of not less than 20 g/g. The high absorption capacity and absorption under load are required to prevent migration or leaking from the water-absorbent resin during use. The saline flow conductivity as disclosed on page 23 of the specification is not less than 20. The saline flow conductivity (SFC) influences the liquid permeability of the water-absorbing agent. It is desirable to have a high saline flow conductivity to improve the absorption rate, and the absorption capacity to reduce leakage of the liquid from the water-absorbent agent. These features are not recognized in WO '358.

The Examples of the present specification produce the water-absorbent resin particles A1 and A2 for use in the water-absorbent agent of the claimed invention. As noted in Table 1 on page 110, the water-absorbent resin particles A2 have a gel volume (GV) of 29.2, an absorption capacity under load (AAP) of 25.1, and a saline flow conductivity (SFC) of 40. Thus, the water-absorbent resin particles of the invention preferably have a high absorption capacity under load and a high saline flow conductivity. The high absorption capacity under load and the high saline flow conductivity of the water-absorbent resin particles in combination with the cationic polymer provide the desirable gel deformation under load and the ball burst strength of the resulting water-absorbent agent. The water-absorbing agent having the claimed properties can not be obtain by having the materials used in WO '358.

As discussed on pages 40 and 41 of the specification, the components of the water-absorbing agent are important to the final properties. In particular, the components are selected

to improve the shape maintaining properties and the water solubility. As discussed in the paragraph bridging pages 42 and 43 the cationic polymer, compound and the water-absorbing resin particles are selected to prevent the loss of absorption properties, improve the shape maintaining properties and improve the ball burst strength of the swollen water-absorbent agent.

The Examples in the present specification demonstrate the improved properties of the resulting water-absorbing agents. As shown in the tables, the water-absorbing agents of the examples exhibit a high gel volume, a high absorption capacity under load and an excellent gel deformation under load. In addition, the water-absorbing agent according to the present invention have improved gel deformation under short time load, ball burst strength and gel deformation deterioration under load.

In view of the above, the water-absorbing agent of the claimed invention is not obvious or anticipated by WO '358. In particular, WO '358 does not expressly or inherently disclose a water-absorbing agent exhibiting a free swelling capacity (GV), absorption capacity and a gel deformation as recited in claim 48. WO '358 also fails to disclose the ball burst strength of claim 49 and the gel deformation determination of claim 50 or the water-absorbing agent containing an inorganic powder as in claim 53.

In view of the above comments, the resulting water-absorbing material of WO '358 does not disclose or suggest the water-absorbing agent of claim 54 having the free swelling capacity, the absorption capacity, and the ball burst strength of not less than 80 gf (16 hrBBS) as claimed. The ball burst strength of claim 55, the gel deformation deterioration of 56 and the inorganic powder of claim 59 are also not disclosed or suggested in WO '358 in combination with the features of claim 54.

Independent claim 60 is directed to a water-absorbing agent comprising a polymer where the water-absorbing agent has a free swelling capacity of not less than 23 grams per gram, gel deformation of not more than 12.5 cm under short time load and a gel deformation deterioration

of not more than 3.5 cm under load with the passage of time. For the reasons discussed above, the water-absorbing material of WO '358 does not exhibit these claimed properties either expressly or inherently. In particular, WO '385 does not specifically or inherently disclose the claimed gel deformation of not more than 3.5 cm under a load with the passage of time ΔPT as in claim 60. The absorption capacity of claim 61 and the gel deformation of claim 62 and the ball burst of claim 63 are also not disclosed or suggested in the water-absorbing material of WO '358.

Independent claim 67 is directed to a water-absorbing agent having a free swelling capacity a ball burst strength and a deterioration of ball burst strength defined by specific amounts. For the reasons discussed above, the water-absorbing material of WO '358 does not inherently or expressly exhibit the claimed characteristics and particularly a DBBS of not more than 40% of claim 67. According, claim 67 and claims 68-70 and 73 which depend from claim 67 are allowable over the art of record.

Claims 78-81 depend from claims 48, 54, 60 and 67 respectively to recited a water-absorbent structure comprising a water-absorbing agent of the independent claim. These claims are allowable for the same reasons with respect to the independent claim.

In view of the above comments, the claims are submitted to be allowable over the art of record. Accordingly, reconsideration and allowance are requested.

Respectfully submitted,



Garrett V. Davis
Reg. No. 32,023

Roylance, Abrams, Berdo & Goodman, L.L.P.
1300 19th Street, N.W., Suite 600
Washington, D.C. 20036
(202) 659-9076

Dated: December 23, 2004